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SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/829,324	KUHNE, STEFAN B.
	Examiner	Art Unit
	Joni Hsu	2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 November 2006</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-87</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-9, 11-21, 30-38, 40-50, 59-67 and 69-79</u> is/are rejected.

7)☒ Claim(s) <u>10, 22-29, 39, 51-58, 68 and 80-87</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   In light of Applicant's amendment to Claim 1, the objection to Claim 1 has been

withdrawn.

2.   Applicant's arguments filed November 22, 2006 have been fully considered but they are

not persuasive.

3.   With regard to Claims 1, 3, 13, 20, 30, 32-42, 49, 59, 61, 71, and 78, Applicant argues

that Frink's (US006226038B1) "single stream editing system" does not operate in a manner

analogous to the distinct threads processing data in parallel of the present invention (page 17).

In response to applicant's argument that the references fail to show certain features of

applicant's invention, it is noted that the features upon which applicant relies (i.e., threads

processing data **in parallel**) are not recited in the rejected claim(s). Although the claims are

interpreted in light of the specification, limitations from the specification are not read into the

claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The Examiner

also points out that according to the specification of this application, a "thread" is "single process

performed by an application, program, or application extension" [035]. The threads of Frink are

single processes performed by an application, program, or application extension, as discussed in

the previous Office Action, and therefore are considered to be threads according to the definition

found in the specification of this application.

Applicant argues that Frink does not teach passing the video data to the application thread for creating the effect to be added to the video data, generating pre-decompressed video data from the video data, and determining parameters which describe the effect (page 17).

In reply, the Examiner disagrees. Frink discloses that an application identifies a stream for which data can be read and reads this data (Col. 4, line 64-Col. 5, line 12). This stream of video data is to be edited (Col. 2, lines 40-42). An effect must be created to be added to the video data in order for the video data to be edited. The video data is compressed (Col. 2, line 59-Col. 3, line 15). This compressed data is then decompressed later on (Col. 7, line 66-Col. 8, line 2), and therefore is pre-decompressed data. Frink describes that an effect to be created includes compositing different streams of video (Col. 7, lines 21-32), and the application thread identifies the streams for which data can be read (Col. 4, line 64-Col. 5, line 12), and therefore the application thread determines parameters which describe the effect. Therefore, Frink discloses passing the video data to the application thread for creating the effect to be added to the video data, generating pre-decompressed video data from the video data, and determining parameters which describe the effect.

Applicant argues that Frink discloses passing video data from a storage system 202 through a HD codec 216 to an HD router 220 or NLE system 206, and this is not analogous to uploading pre-decompressed video data to a video hardware (pages 17-18).

In reply, the Examiner disagrees. Frink discloses a HD video system 204 and a non-linear editing system (Col. 7, lines 44-46). The HD video system 204 synchronizes video data and decompresses video data (Col. 7, lines 62-67). Frink discloses editing video data (Col. 2, lines 40-42) using the NLE system 206 (Col. 7, lines 44-46). Therefore, the HD video system

204 and the NLE system 206 are considered to be a video hardware. Since Frink discloses that

the previously compressed video data is passed to the HD video system 204 which then

decompresses the video data and then passes it to the NLE system 206 (Col. 7, line 62-Col. 8,

line 6), Frink discloses uploading pre-decompressed video data to a video hardware.

4.   With regard to Claims 13, 42, and 71, Applicant argues that Frink does not teach

generating pre-decompressed video data (page 18).

       In reply, the Examiner disagrees. The video data is compressed (Col. 2, line 59-Col. 3,

line 15). This compressed data is then decompressed later on (Col. 7, line 66-Col. 8, line 2), and

therefore is pre-decompressed data. Therefore, Frink discloses generating pre-decompressed

video data.

       Applicant argues that Frink does not teach the limitation of determining parameters

which describe the effect (page 18).

       In reply, the Examiner disagrees. Frink describes that an effect to be created includes

compositing different streams of video (Col. 7, lines 21-32), and the application thread identifies

the streams for which data can be read (Col. 4, line 64-Col. 5, line 12), and therefore the

application thread determines parameters which describe the effect.

5.   With regard to Barton (US006233389B1), Applicant argues that Barton is directed to a

"Time Warping System", a field of endeavour quite dissimilar from, and as such not properly

combinable with, systems for HDTV editing and effects previsualization using SDTV devices, as

Frink is directed to (page 19).

In reply, the Examiner disagrees. Barton discloses MPEG formatted video streams that are internally transferred and manipulated (Col. 2, lines 4-21). Since the video stream is manipulated, this means that the video stream is edited. Frink is also directed to editing video streams (Col. 2, lines 40-42), and therefore Barton is considered to be properly combinable with Frink.

6.   With regard to Claim 16, Applicant argues that Frink does not disclose that the application initiates a thread for each step performed. The cited passage is devoid of any discussion of threads or multiple, separately initiated threads (page 19).

In reply, the Examiner disagrees. Frink discloses that the application identifies the streams for which data can be read (Col. 4, line 61-Col. 5, line 12), and therefore initiates each of the processes. According to the specification of this application, a "thread" is "single process performed by an application, program, or application extension" [035]. Therefore, the application initiates a thread for each step performed.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8.   Claims 1, 3, 13, 20, 30, 32-42, 49, 59, 61, 71, and 78 are rejected under 35 U.S.C. 102(b)

as being anticipated by Frink (US006226038B1).

9.   With regard to Claim 1, Frink describes a method for processing video data to produce an

effect to occur at a future time (*previsualization of effects to be added to high definition video*

data, Col. 1, lines 31-34), comprising implementing an application thread (*application may*

identify a stream for which data can be read, Col. 4, lines 64-66), an upload thread (*sent to non-*

linear editing system 206, Col. 7, line 66-Col. 8, line 2), a decoding thread (*decoder processor*

(codec), Col. 5, lines 21-25; *HD codec 216 is used to decompress HD video data*, Col. 7, lines

66-67), a render thread (*full resolution high definition video data with the added effects is*

rendered, Col. 1, lines 63-64), and a presenter thread (*display for previsualizing video data with*

the added effects, Col. 1, lines 50-54). Frink discloses that an application identifies a stream for

which data can be read and reads this data (Col. 4, line 64-Col. 5, line 12). This stream of video

data is to be edited (Col. 2, lines 40-42). An effect must be created to be added to the video data

in order for the video data to be edited. The video data is compressed (Col. 2, line 59-Col. 3, line

15). This compressed data is then decompressed later on (Col. 7, line 66-Col. 8, line 2), and

therefore is pre-decompressed data. Frink describes that an effect to be created includes

compositing different streams of video (Col. 7, lines 21-32), and the application thread identifies

the streams for which data can be read (Col. 4, line 64-Col. 5, line 12), and therefore the

application thread determines parameters which describe the effect. Therefore, Frink discloses

passing the video data to the application thread for creating the effect to be added to the video

data, generating pre-decompressed video data from the video data, and determining parameters

which describe the effect. Frink discloses a HD video system 204 and a non-linear editing

system (Col. 7, lines 44-46). The HD video system 204 synchronizes video data and

decompresses video data (Col. 7, lines 62-67). Frink discloses editing video data (Col. 2, lines

40-42) using the NLE system 206 (Col. 7, lines 44-46). Therefore, the HD video system 204 and

the NLE system 206 are considered to be a video hardware. Since Frink discloses that the

previously compressed video data is passed to the HD video system 204 which then

decompresses the video data and then passes it to the NLE system 206 (Col. 7, line 62-Col. 8,

line 6), Frink discloses uploading pre-decompressed video data to a video hardware. Frink

discloses passing the pre-decompressed video data to the upload thread for uploading the pre-

decompressed video data into the video hardware (Col. 2, line 59-Col. 3, line 15; *resizer 124*

adjusts the higher resolution data to a lower resolution format, the output of resizer is sent to

SDTV frame buffer, Col. 3, lines 26-32); passing the pre-decompressed video data to the

decoding thread for decoding the pre-decompressed video data to produce decoded video data

(*HD codec 216 is used to decompress HD video data that was previously compressed for storage*

before it is sent to non-linear editing system 206, Col. 7, line 66-Col. 8, line 2); passing the

decoded video data to the render thread rendering the effect in the decoded video data to produce

output video data; and passing the output video data to the presenter thread to present the output

video data (*HDTV video data router 220 determines whether HD video data is to be sent to the*

non-linear editing system 206, Col. 8, lines 2-6, *the video data including the effects is blended by*

the SDTV effects module 232, which outputs the edited video data to SDTV video input/output

module 234, the video data with the effects may be previsualized on SDTV monitor 236, Col. 8,

lines 40-58). According to the specification of this application, a "thread" is "single process

performed by an application, program, or application extension" [035]. The threads of Frink are

single processes performed by an application, program, or application extension, and therefore

are considered to be threads according to the definition found in the specification of this

application.

10.   With regard to Claim 3, according to the disclosure of this application, Bus Mastering is a

process to retrieve data directly from system memory without any interaction with the CPU

[040], which is the same as DMA. Frink describes that the pre-decompressed video data is

uploaded into video hardware using a Bus Mastering process (*HD video processing system 604*

uses multiple DMA channels at the AGP interface 654 to access the host memory 652 for playing

and capturing multiple streams of video, Col. 11, lines 7-17).

11.   With regard to Claim 13, Frink describes a method for processing video data to produce

an effect to occur at a future time (Col. 1, lines 31-34). Frink discloses that an application

identifies a stream for which data can be read and reads this data (Col. 4, line 64-Col. 5, line 12).

This stream of video data is to be edited (Col. 2, lines 40-42). An effect must be created to be

added to the video data in order for the video data to be edited. The video data is compressed

(Col. 2, line 59-Col. 3, line 15). This compressed data is then decompressed later on (Col. 7, line

66-Col. 8, line 2), and therefore is pre-decompressed data. Frink describes that an effect to be

created includes compositing different streams of video (Col. 7, lines 21-32), and the application

thread identifies the streams for which data can be read (Col. 4, line 64-Col. 5, line 12), and

therefore the application thread determines parameters which describe the effect. Therefore,

Frink discloses receiving the video data; creating the effect (Col. 2, lines 40-42; Col. 4, line 64-Col. 5, line 12); generating pre-decompressed video data from the video data (Col. 2, line 59-Col. 3, line 15). Frink discloses a HD video system 204 and a non-linear editing system (Col. 7, lines 44-46). The HD video system 204 synchronizes video data and decompresses video data (Col. 7, lines 62-67). Frink discloses editing video data (Col. 2, lines 40-42) using the NLE system 206 (Col. 7, lines 44-46). Therefore, the HD video system 204 and the NLE system 206 are considered to be a video hardware. Since Frink discloses that the previously compressed video data is passed to the HD video system 204 which then decompresses the video data and then passes it to the NLE system 206 (Col. 7, line 62-Col. 8, line 6), Frink discloses uploading pre-decompressed video data to a video hardware. Frink discloses decoding the pre-decompressed video data to produce decoded video data (Col. 7, line 66-Col. 8, line 2); determining parameters which describe the effect; rendering the effect in the decoded video data to produce output video data; and presenting the output video data (Col. 8, lines 2-6; Col. 8, lines 40-58).

12.   With regard to Claim 20, Frink describes that the pre-decompressed video data is uploaded into video hardware using a Bus Mastering process (Col. 11, lines 7-17).

13.   With regard to Claims 30, 32, 42, and 49, these claims are similar in scope to Claims 1, 3, 13, and 20, respectively, and therefore are rejected under the same rationale.

14.   With regard to Claim 59, Claim 59 is similar in scope to Claim 1, except that Claim 59 is

for a computer readable medium including instructions for causing a computer system to execute

the method. Frink describes a computer readable medium including instructions for causing a

computer system to execute the method (*hardware dataflow interface which enables*

asynchronous data processing elements to be interconnected using an interconnection protocol

that controls the flow of data between processing elements, Col. 5, lines 34-38). Therefore,

Claim 59 is rejected under the same rationale.

15.   With regard to Claims 61, 71, and 78, these claims are similar in scope to Claims 3, 13,

and 20, respectively, and therefore are rejected under the same rationale.

16.   Thus, it reasonably appears that Frink describes or discloses every element of Claims 1,

3, 13, 20, 30, 32, 42, 49, 59, 61, 71, and 78 and therefore anticipates the claims subject.

Claim Rejections - 35 USC § 103

17.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a whole
> would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived
> by the manner in which the invention was made.

18.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating obviousness
            or nonobviousness.

19.   Claims 2, 14-16, 31, 43-45, 60, and 72-74 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Frink (US006226038B1) in view of Barton (US006233389B1).

20.   With regard to Claim 2, Frink is relied upon for the teachings as discussed above relative

to Claim 1.

        However, Frink does not teach implementing a release thread for releasing resources

utilized in decoding and rendering. However, Barton describes implementing a release thread

for releasing resources utilized in decoding and rendering (*effects usch as picture in picture can*

be implemented with multiple decoders, Col. 4, lines 18-19; *the sink 803 consumes buffers,*

taking a buffer from the upstream transform, sending the data to the decoder, and then releasing

the buffer for reuse, Col. 7, lines 63-65). Barton discloses MPEG formatted video streams that

are internally transferred and manipulated (Col. 2, lines 4-21). Since the video stream is

manipulated, this means that the video stream is edited. Frink is also directed to editing video

streams (Col. 2, lines 40-42), and therefore Barton is considered to be properly combinable with

Frink.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify the device of Frink to include implementing a release thread for releasing resources utilized in decoding and rendering as suggested by Barton because Barton suggests that a release thread is needed so that the resources can be reused (Col. 7, lines 64-65).

21.   With regard to Claim 14, Claim 14 is similar in scope to Claim 2, and therefore is rejected under the same rationale.

22.   With regard to Claim 15, Frink describes that the steps of creating the effect, generating pre-decompressed video, and determining parameters are performed by an application (Col. 2, lines 59-67; Col. 4, line 64-Col. 5, line 12).

23.   With regard to Claim 16, Frink discloses that the application identifies the streams for which data can be read (Col. 4, line 61-Col. 5, line 12), and therefore initiates each of the processes. According to the specification of this application, a "thread" is "single process performed by an application, program, or application extension" [035]. Therefore, the application initiates a thread for each step performed.

24.   With regard to Claims 31 and 43-45, these claims are similar in scope to Claims 2 and 14-16, respectively, and therefore are rejected under the same rationale. Claims 60 and 72-74 are also similar in scope to Claims 2 and 14-16, respectively, and therefore are rejected under the same rationale.

25.   Claims 4, 21, 33, 50, 62, and 79 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Frink (US006226038B1) in view of Geiger (US 20030061457A1).

26.   With regard to Claim 4, Frink is relied upon for the teachings as discussed above relative

to Claim 1.

However, Frink does not teach issuing a snooping command to determine a timing of

each thread implementation. However, Geiger describes using a data movement engine to

manage a codec engine embedded on a memory module [0003], and issuing a snooping

command to determine a timing of each thread implementation (*snooping algorithm, performed*

by the compressed cache manager 720 block, which examines the number of I/O store and

restore requests as a function of time, [0123]).

It would have been obvious to one of ordinary skill in the art at the time of invention by

applicant to modify the device of Frink to include issuing a snooping command to determine a

timing of each thread implementation as suggested by Geiger because Geiger suggests the

advantage of being able to perform multiple transfers in a coherent manner [0139].

27.   With regard to Claims 21, 33, and 62, these claims are each similar in scope to Claim 4,

and therefore are rejected under the same rationale. With regard to Claims 50 and 79, these

claims are each similar in scope to Claim 21, and therefore are rejected under the same rationale.

28.   Claims 5, 34, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Frink (US006226038B1) in view of Watkins (US006337710B1).

29.   With regard to Claim 5, Frink is relied upon for the teachings as discussed above relative

to Claim 1. Frink describes that the application thread performs reading a sample of the video

data; allocating a sample object for the sample (*an application may identify a stream for which*

data can be read, and then may determine an amount of data which should be read, Col. 4, lines

64-67; *disk buffer memory 114 may hold multiple frames of video*, Col. 5, lines 13-25);

processing the sample to produce the pre-decompressed video data; and transferring the sample

object to the upload thread (*when a stored video frame is manipulated, the original frame*

remains untouched and a new frame or sequence of frames is created for the new video, video

data is passed between the storage system 202 and the HD router 220 through HD codec 216,

HD codec 216 is used to decompress HD video data that was previously compressed for storage

before it is sent to non-linear editing system 206, Col. 7, line 52-Col. 8, line 6).

        However, Frink does not teach partially decoding the sample. However, Watkins

describes that the application thread performs reading a sample of the video data; allocating a

sample object for the sample; partially decoding the sample to produce the pre-decompressed

video data; and transferring the sample object to the upload thread (Col. 6, lines 14-29).

        It would have been obvious to one of ordinary skill in the art at the time of invention by

applicant to modify the device of Frink to include partially decoding the sample as suggested by

Watkins. Watkins suggests partially decoding the data and obtaining the partially decoded data

from an intermediate point between the decoder first stage 902 and the decoder last stage 904

and providing it to the display editor module 204 (Col. 6, lines 20-24). This way, the system is

able to provide feedback before the data has completely finished decoding so that the test inputs

can be adjusted to provide fast, interactive debugging that would greatly enhance productivity by

reducing the time and effort necessary for testing (Col. 1, lines 41-45).

30.   With regard to Claims 34 and 63, these claims are each similar in scope to Claim 5, and

therefore are rejected under the same rationale.

31.   Claims 6-9, 11, 12, 35-38, 40, 41, 64-67, 69, and 70 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Frink (US006226038B1) and Watkins (US006337710B1) in view of

Geiger (US 20030061457A1).

32.   With regard to Claim 6, Frink and Watkins are relied upon for the teachings as discussed

above relative to Claim 5. Frink describes that the upload thread performs obtaining a video

memory surface; and uploading the pre-decompressed video data into the video memory surface

(*video data is passed between the storage system 202 and the HD router 220 through HD codec*

216, HD codec 216 is used to decompress HD video data that was previously compressed for

*storage before it is sent to non-linear editing system 206*Col. 7, line 62-Col. 8, line 6).

However, Frink and Watkins do not teach issuing a first snooping command. However,

Geiger describes issuing a first snooping command (*memory controller may coupled to an*

expansion bus, a video device may be coupled to the expansion bus, [0017], *snooping algorithm,*

performed by the compressed cache manager 720 block, which examines the number of I/O store

and restore requests as a function of time, [0123]. This would be obvious for the same reasons given in the rejection for Claim 4.

33.   With regard to Claim 7, Frink describes that the pre-decompressed video data is uploaded into the video memory surface using a Bus Mastering process (*system 604 uses multiple DMA channels at the AGP interface 654 to access the host memory 652*, Col. 11, lines 7-17).

34.   With regard to Claim 8, Frink describes that the decoder thread performs obtaining a new video memory surface; performing the decoding to produce the decoded video data in the new video memory surface (*HD codec 216 is used to decompress HD video data that was previously compressed for storage before it is sent to non-linear editing system 206*, Col. 7, line 66-Col. 8, line 2); and attaching the new video memory surface to the sample object (*non-linear editing system 206 is used for previsualization of edited HD video data, previsualization saves time since effects can be viewed as they are added to the video data*, Col. 8, lines 40-58).

However, Frink does not teach issuing a second snooping command and determining a status of the new video memory surface. However, Geiger discloses that the decoder thread performs issuing a second snooping command (*writing the data to the input buffer 252 of the codec engine 250, reading the data from the output buffer of the codec engine 250...the address of the coherent read or write operation is provided to the processor 100 for snooping purposes*, [0171]); obtaining a new memory surface (*reading the source data...the data may be streamed from the source data and provided in respective portions to the codec engine*, [0171]). Snooping involves determining if updated data corresponding to the address is stored in either of the L1 or

L2 caches in the processor [0169], and therefore snooping involves determining a status of the

new memory surface. This would be obvious for the same reasons given in the rejection for

Claim 4.

35.   With regard to Claim 9, Frink describes that an effect to be created includes compositing

different streams of video (Col. 7, lines 21-32), and the application thread identifies the streams

for which data can be read (Col. 4, line 64-Col. 5, line 12), and therefore the application thread

further performs determining, in the application, effect parameters for the effect; passing the

effect parameters from the application to the render thread (Col. 8, lines 33-58).

36.   With regard to Claim 11, Frink describes that the render thread performs assigning a

target memory surface to the output sample object; rendering the effect; and storing the rendered

effect in the target memory surface (Col. 6, line 63-Col. 7, line 17).

37.   With regard to Claim 12, Frink describes that the presenter thread performs placing the

output sample object in a presenter queue (195, Figure 1b); and performing a presenter method to

present the output sample object as the output video data (*output of the horizontal resizer may be

written to a FIFO 195, the data is read from the FIFO 195*, Col. 4, lines 6-13).

38.   With regard to Claims 35-38, 40, and 41, these claims are similar in scope to Claims 6-9,

11, and 12, respectively, and therefore are rejected under the same rationale. Claims 64-67, 69

and 70 are also similar in scope to Claims 6-9, 11, and 12, respectively, and therefore are

rejected under the same rationale.

39.   Claims 17-19, 46-48, and 75-77 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Frink (US006226038B1) and Barton (US006233389B1) in view of Hochmuth

(US 20030212742A1).

40.   With regard to Claim 17, Frink and Barton are relied upon for the teachings as discussed

above relative to Claim 15. Barton describes releasing resources, as discussed above in the

rejection for Claim 14.

        However, Frink and Barton do not teach that the steps of uploading the pre-decompressed

video, decoding the pre-decompressed video data, rendering the effect, and releasing resources

are performed by a 3D-Server. However, Hochmuth describes that the steps of uploading the

pre-decompressed video (*transmitting the compressed composite image across a routable

network*, [0004]), decoding the pre-decompressed video data (*decompression engine*, [0036]),

and rendering the effect [0022] are performed by a 3D-Server (*X server controls bitmap display

device and distributes 3D-renderings to multiple 3D-rendering pipelines*, [0024]).

        It would have been obvious to one of ordinary skill in the art at the time of invention by

applicant to modify the devices of Frink and Barton so that the steps of uploading the pre-

decompressed video, decoding the pre-decompressed video data, rendering the effect, and

releasing resources are performed by a 3D-Server as suggested by Hochmuth because Hochmuth

suggests that a 3D-Server is needed in order to have accurate, real-time visualization of models

while having the ability to work concurrently and collaboratively across an extended enterprise
having distributed locales [0003, 0024].

41.   With regard to Claim 18, Frink does not teach that the 3D-Server initiates a thread for
each step performed. However, Hochmuth describes that the 3D-Server controls the bitmap
display device and distributes 3D-renderings to multiple 3D-rendering pipelines [0024]. Since
the 3D-server controls this processing, the 3D-server initiates a thread for each step performed.
This would be obvious for the same reasons given in the rejection for Claim 17.

42.   With regard to Claim 19, Frink does not teach that the application and 3D-Server operate
in parallel. However, Hochmuth describes that application 22 may run parallel from client
requests for an image to be composited, compressed and transferred thereto, for example, an
operator may direct application 22 to render a particular 3D image and another operator at a
remote client may request transfer of the 3D image to the remote client for display thereof
[0032]. The 3D-Server distributes 3D-renderings to multiple 3D-rendering pipelines [0024].
Therefore, application 22 can render a particular 3D image in parallel to the 3D-Server
transferring the 3D image to the remote client for display thereof, and therefore the application
and 3D-Server operate in parallel. This would be obvious for the same reasons given in the
rejection for Claim 17.

43.   With regard to Claims 46-48 and 75-77, these claims are similar in scope to Claims 17-
19, respectively, and therefore are rejected under the same rationale.

Allowable Subject Matter

44.   Claims 10, 22-29, 39, 51-58, 68, and 80-87 are objected to as being dependent upon a

rejected base claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

45.   The prior art taken singly or in combination do not teach or suggest a method for

processing video data to produce an effect to occur at a future time, comprising implementing an

application thread that partially decodes a sample, an upload thread that issues snooping

commands, a decoding thread, a render thread, and a presenter thread, wherein the output sample

object is a proxy, as recited in Claims 10, 39, and 68.

The prior art also does not teach a method for processing video data to produce an effect

to occur at a future time, comprising partially decoding the sample to produce the pre-

decompressed video data; uploading the pre-decompressed video data; decoding the pre-

decompressed video data; rendering the effect in the decoded video data; releasing resources

utilized in decoding and rendering; wherein the uploading, decoding, rendering, and releasing are

performed by a 3D-Server, as recited in Claims 22, 51, and 80. Claims 23-29, 52-58, and 81-87

depend from these claims, and therefore also contain allowable subject matter.

46.   The closest prior art (Theriault US 20040091243A1) teaches that the output sample

object is a proxy (*off-line editing manipulations may be performed using these proxy images*,

[0076]). However, Theriault does not teach decoding the pre-decompressed video data.

Prior Art of Record

The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Theriault (US 20040091243A1) teaches a video off-line editing system that uses proxy

images [0076].

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joni Hsu whose telephone number is 571-272-7785. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JH

ULKA CHAUHAN
SUPERVISORY PATENT EXAMINER